ANTIOXIDANT POTENTIAL OF RED DRAGON FRUIT (*Hylocereus polyrhizus*) PEEL EXTRACT ON SPERMATOGENIC AND SERTOLI CELLS IN MALE MICE (*Mus musculus*) WITH HEAT TEMPERATURE EXPOSURED

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ABSTRACT

The aim of this research was to know whether red dragon fruit (*Hylocereus polyrhizus*) peel extract could protect spermatogenic and sertoli cell in mice (*Mus musculus*) exposured to heat temperature. Mice were exposed to a temperature of 40^{o}C, 45 minutes daily, for 36 days. This study used twenty mice which were devided equally into 5 groups. K(-), the negative control group was not exposed to heat and only given 1% CMC-Na suspension. K(+), the positive control group was exposed to heat and given 1% CMC-Na suspension. P1, P2 and P3 were given red dragon fruit peel with doses of 250, 500, and 1000 mg/kg BW respectively 5 minutes after heat exposure. All of the treatment were given orally (0,5 ml). The observations showed significantly different ($p<0,05$) in all of variable. Result showed significant difference in spermatogenic and sertoli cells between K(-) and K(+) groups, K(+) and P2 group, and showed unsignificant difference between P2 and K(-) group in spermatogenic and sertoli cells. The result of this research showed that red dragon fruit peel extract could protect the spermatogenic and sertoli cells in male mice exposured by heat. The optimal dose to protect the spermatogenic and sertoli cells was 500 mg/kgBW.

Keywords **:** *Hylocereus polyrhizus*, heat exposure, spermatogenic cells, sertoli cells, *Mus musculus*.